CUMSTON (C. G.)

On Primary Malignant Tumors of the Clitoris.

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On Primary Malignant Tumors of the Clitoris.

A CLINICAL LECTURE DELIVERED AT THE TREMONT DISPENSARY

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GENTLEMEN: — I propose to-day to discuss particularly the question of primary cancer of the clitoris, and I trust that my efforts may be successful. This subject is one that should be known to you, as this affection is met with, though infrequently, as a primary lesion of the clitoris, and it is well to be on your guard.

All the ordinary causes of cancer in general may be applied to epithelioma of the clitoris. Dauriac, in his studies, came to the conclusion that this neoplasm appears rather after the menopause, between the age of forty and sixty. He reports one case in which the affection appeared at seventy, and another at seventy-six, while Lafleur mentions a case of melanotic sarcoma of the clitoris in a woman of eighty.

However, childhood is not exempt, and as a proof of this I would mention a case reported by Dr. de Saint-Germain, of a sarcoma of the clitoris in a child of five years.

Former labors and trauma appear to be predisposing causes of cancer of the clitoris. Repeated manipulations of this organ have been the supposed cause, a case of which is reported by Boivin and Dugès. Hutchinson believes that parts formerly affected by syphilitic lesions are particularly prone to become the seat of malignant neoplasms, and he says: "Syphilitic ulcerations with inflammation and hypertrophy can degenerate into cancer so gradually and imperceptibly that it is quite impossible to say when one lesion ends and the other commences." It is probable that syphilitic lesions act by creating a "*locus minoris resistentiæ*," thus forming a predisposed spot for cancer in predisposed subjects.

Pruritus vulvæ has also been accused as an ætiological factor on account of repeated irritation from the fingers to which it gives rise.

In other cases, psoriasis and chronic eczema of the mucous membrane of the vulva is often the starting point of the affection. Vaginal discharges, producing a constant irritation, prolonged sitting, have also been mentioned as a cause by some writers as predisposing to cancer of the clitoris.

The affection belongs to all classes of society, while according to Bernutz

esthiomene of the vulva is the result of poverty and vice.

Of all the varieties of malignant neoplasms met with in the region of the clitoris, epithelioma is by far the most common.

The encephaloid carcinoma, the melanic carcinoma, squirrhus and sarcoma have been met with, but these types are rare.

The following is a report of a complete histological examination of an epithelioma, made by Dr. Hutinel. The piece was first hardened in gum and alcohol. The sections, made perpendicular to the surface of ulceration, showed them to be full of epithelial prolongations, like a glove finger, "en masse" or like cylinders; sometimes anastomosing one with another, and separated by a very vascular connective tissue, and presenting in places embryonic proliferations. Each of the epithelial cylinders was made up of large cells, identical with the cells of Malpighis' body, but were not so regular in disposition.

Elongated cells, closely cemented together, were to be seen beside the epidermic globes. In other places, the cellular character had nearly disappeared, giving place to a yellowish substance of colloid aspect, in some parts of which yellowish nuclei stood out, evidently being the traces of cell nuclei.

In the neighborhood of the neoplasm, the connective tissue was infiltrated by embryonic cells, filling up the spaces between the connective tissue fibres and around the vessels. In several places the transition of the epithelial and the embryonic elements was so insensible that it seemed as if the transformation could be observed. Some vessels seemed to be cut through pure epithelial tissue, while others were filled with a colloid substance. The epithelium threw out branches which penetrated the deepest parts of the tissue.

Boivin and Dugès mention a case of encephaloid carcinoma, and one of squirrh of the clitoris. In a case due to Demarquay, the histological examination showed it to be a melanic cancer. Two cases of sarcoma of the clitoris are cited bp Dauriac. The first was reported by de Saint-Germain; the histological examination of the growth showed the following peculiarities. In some spots the normal covering of the mucous membrane was preserved. The underlying layer of epithelium was made up of small round elements, having a very large nucleus. A considerable quantity of capillary vessels were detected between them. These elements were closely embodied against each other. In some places they had a fusiform or star-shaped aspect, and were separated by an abundance of amorphous and granular substance.

In another case examined by Prof. Cornil, the piece was hardened in alcohol, and the sections colored with picro-carmine and log-wood. The epidermis was markedly altered in the centre of the neoplasm, and it was difficult to distinguish the epidermis from the dermis. Between the epidermic cells were found a large number of cells filled with pigment

and throwing out multiple prolongations.

The deep cells of Malpighi's stratum contained pigment, the papillæ were filled with cells more or less voluminous, rounded or of irregular shape, and very pigmented.

If from the epidermis, the central parts of the specimen were examined, the tumor was seen to sink deeply into the dermis. It was principally made up of cells of variable size and rounded in shape, the greater number of which measured from 10 to 15 micromillimetres, with a few attaining the diameter of 40 millimetres. These cells were closely stuck together and piled up, forming nodules or more or less regular agglomerations, separated from each other by connective tissue containing numerous and dilated vessels. The majority of the cells contained pigment granulations in their interior, consequently showing the tumor to be a melanic sarcoma.

Cancer of the clitoris begins, in the great majority of cases, insidiously, and developes slowly. During a certain time, which is of variable length, the neoplasm gives no signs of its presence, and remains unnoticed by the patient.

Later, however, the patient will complain of a sensation of heat or burning at the vulva, especially after walking or after sitting for some time. In other cases, a disagreeable pruritus of the vulva is the first sign which calls the atteution of the patient to her genitals. You will find some women in whom this pruritus is very severe, so much so as to be the starting-point of genital excitation, obliging the patient to resort to masturbation.

With this pruritus of the vulva, you may perhaps on examination, find that there is a sero-bloody liquid with a fœtid odor discharged from the parts, and moistening the entire region.

It will most likely be at the time this discharge begins that you will be consulted, that is to say about a few months after the commencement of the affection.

Now, if you make an examination of the vulva, you will find either a tumor or an ulceration. In the first instance, which is by far the most frequent, you will be in presence of the nodular type of epithelioma. The tumor at this time varies from the size of a nut to that of a large egg. Its color is usually reddish, and is made up of a number of lobes agglomerated and clustered together, having the appearance of a cauliflower.

These lobes are sometimes covered by a delicate membrane, which, if torn, gives rise to slight bleeding. In other cases, the tumor is reddish, irregular, there are depressions over its surface which presents yellowish points. At the same time, the surface is usually bathed in purulent, bloody liquid of very fœtid odor. These tumors sometimes give place to slight hæmorrhage, but which is not of any danger to the patient.

The consistence of the neoplasm is different, but quite often it is firm.

At first, limited to the clitoris, the growth tends little by little to invade the neighboring parts, first the labia minora, and majora, vagina, etc.

The patient may only consult you when the growth has already invaded the clitoris and labia minora, so that it will be difficult to decide on the initial points of the neoplasm, which is all the more natural, because the patient is often deceived herself as to the primary seat of the growth.

In a case published by Richet, the patient stated that the tumor commenced on the labia majora. In spite of this fact, Richet, after a most careful examination, concluded that the epithelioma began by the clitoris, this being all the more probable, because the clitoris corresponds to the corpus cavernosa in man, which is quite often the seat of this affection.

In the ulcer type of epithelioma, you will find an irregular ulceration, with an indurated base, and elevated above the surrounding parts. This ulceration varies in size from a ten cent piece to a dollar piece. The surface is either covered by fleshy granulations, which are exuberant and bleed easily when touched, or the ulcer is deeply seated, irregular in surface, and has a reddish color. The borders of the ulceration are hard, elevated, rough, unequal, and covered with exuberant granulations. They are sharply cut, moist, of a rosy color on the inner aspect, and covered with scabs on the periphery.

Epidermic scales, similar to those found in a commencing cancroid may also be met with. The parts surrounding the ulceration may be covered with patches of psoriasis.

You will sometimes find them fissured or thickened, hard and reddish, and looks as if it were raised up by a subcutaneous projection from the tumor. The labia, which is the seat of the ulceration, is undurated, tumefied, and may be so large as to attain three times its normal size.

In this case, when the neoplasm has taken such a development, the hair follicles may have their vitality destroyed, rendering the vulva hairless.

Both nodular and ulcerous types of epithelioma develop sooner or later an inguinal adenitis.

Edes has reported two cases of epithelioma of the clitoris. The first case was an uumarried female of forty-five, who for the past five years had complained of irritation of the parts but had only recently noticed the presence of a growth. There was also some irritation about the meatus urinarius, sometimes accompanied by pain on urinating. For three weeks the patient had noticed a discharge from the tumor. The inguinal glands were not involved. The clitoris with the neoplasm were removed with a Paquelin cautery ; the operation was not complicated by hæmorrhage of any consequence.

The second case was that of a woman who had been treated for chancre for over a year, but without improvement. The inguinal glands were enlarged. The neoplasm was removed, but the patient died three months later.

Another case of carcinoma of the clitoris, due to Merkle, was that of a woman of sixty-one years, who had a tumor the size of an apple, which was just beginning to break down. There was found one enlarged gland in the left groin. The neoplasm was removed with the thermo-cautery; the patient, however, died seventy-three days after. The autopsy showed the growth to be an epithelioma of the clitoris wtth metastasis in the lymphatics.

Besides epithelioma, which is the most common malignant primary neoplasm of the clitoris, I would mention others, of extreme rarity it is true, because the possibility of their presence should be known to you.

A melanotic carcinoma was obtained by Demarquay in 1868, in a woman aged seventy-two. This tumor in the beginning was only the size of a pea, black in color, and perfectly indolent. It remained for a considerable time without increasing in size, and then suddenly it took on such a rapid growth that it ended by nearly completely obliterating the orifice of the vulva.

At the same time it ulcerated in several places, giving rise to a discharge of a sticky liquid, which at first was white and finally became yellow, staining the underclothing. The clitoris became the seat of a slightly oozing sero-bloody liquid and very sharp lancing pains. The patient was operated on and microscopical examination of the growth showed it to be a melanotic carcinoma.

Simple or melanotic sarcoma of the clitoris have also been met with, as well as myxosarcoma. A case of a little girl of five has been reported by de Saint Germain. The growth consisted of a soft mass, hanging from the clitoris and pushing aside the labia majora.

At its upper part it continued directly with the skin forming the hood, while at its lower aspect it presented lobules, separated by deep clefts. There was no pigmentation of the skin or hypertrophy of the inguinal glands.

From these characters the neoplasm was considered to be only a simple hypertrophy of the clitoris and its hood.

Extirpation was performed, and microscopical examination showed that it was a sarcoma. The neoplasm recurred several times in spite of three successive operations, and the little patient died from general metastasis of the affection.

Melanotic sarcoma may also be met with in the clitoris, as the two following cases will show you. The first, reported by Lafleur, was a woman of eighty. The patient suffered from severe periodic hæmorrhages from the parts. The growth had been growing for three years.

It was amputated, the patient making a good recovery. Microscopical examination of the neoplasm proved that it was a melanotic sarcoma.

Dr. Terrillon has recorded the case of a woman of sixty-two years, who presented a tumor the size of a walnut at the site of the clitoris. This

tumor was hard, regular in shape, without nodules or clefts, and perfectly black in color. All around the growth the mucous membrane of the vulva was also black, uniformally pigmented, excepting in a few spots of healthy tissue. This coloration had invaded all of the vaginal mucous membrane up to that of the cervix. The inguinal glands were not enlarged

The neoplasm was totally removed, the whole wound healing rapidly. However, four or five months later, several small blackish tumors appeared on the right labia minora. At the same time a large bunch of glands was found in the corresponding groin. This bunch was the size of a fist, irregular in shape, and was adherent to the skin.

In the left groin, a few indurated glands were felt, but they were separated from each other. An enlarged gland was also discovered in the subclavicular space on the right side. On the back was seen a blackish tumor the size of a walnut, situated in the skin. The patient soon died from the extension of the affection.

The autopsy revealed, besides the above-mentioned lesions, a liver and spleen filled with small foci of blackish color. The inguinal, iliac, abdominal and thoracic glands, were invaded by a melanotic deposit and were very soft.

A histological examination demonstrated the presence of a melanotic sarcoma, a generalized sarcomatosis, having for starting point the clitoris.

As to myxosarcoma of the clitoris, I am acquainted with but one case, and that due to Robb. The patient was a married woman of twenty-six. She complained of pain about the external genitals, which was increased by the act of coitus. A tumor was found which occupied the left crus clitoridis. It was pointed at either end, hard, movable and slightly lobulated The neoplasm was contained in a fibrous capsule, which rendered enucleation easy to accomplish with cocaine. Some free oozing followed, but the wound healed well. Microscopical examination showed the neoplasm to be a myxosarcoma.

In another form of epithelioma of the clitoris, which is most interesting and important to note, is where the neoplasm is preceded and accompanied by patches of psoriasis of the vulva, similar to psoriasis of the buccal cavity, so well described by Prof. Debove.

A case of this kind was recorded by Dr. Péan, and I desire to relate it as it will be of considerable instruction to you.

The patient had an ulceration of epithleomatous origin the size of a fifty cent piece, extending from the clitoris to the internal aspect of the right labia majora. The base of this ulcer was indurated, and the induration extended in an irregular manner for some distance away from the growth.

Around the ulceration were seen some whitish patches, which were cracked, and presented the characteristic aspect of psoriasis. They extended three or four centimetres and

covered the mucous membrane in all points where the induration was felt.

The patient declared that these whitish patches, which were indolent, had preceded the appearance of the ulceration at least two years.

The inguinal glands were perfectly normal.

Now, gentlemen, this leucoplasia of the vulva, which may precede and accompany epithelioma of the clitoris, appears to me to create an interesting analogy between epithelioma of the clitoris and cancroid of the lips. This is not the only point of likeness in these affections; they both have a marked tendency to recur after operation.

Neoplasms of the clitoris give place to a number of functional disturbances which are common to all types. So long as the epithelioma remains limited to the clitoris, the patient will only complain to you of heat or burning sensations, which are all the more sharp, according to the greater or less amount of surface of ulceration, which is naturally irritated by the passage of urine and vaginal secretions.

The neoplasm may produce an extremely bad and constant pruritus of the vulva, or it may cause sharp lancing pains, which may shoot up as far as the breasts.

When a secretion is established from the tumor, which has the usual fetor and irritating qualities found in all liquids coming from malignant growths, it will little by little produce an inflammation of the vaginal mucous membranes, and even vaginitis.

As the cancer progresses, and in so doing invades the neighboring tissues, the functional disturbances are still more pronounced. If it extends to the meatus urinarius, micturition will become painful and difficult, and the patient will experience such a burning that she will dread the time for urinating. If the growth invades the canal of the urethra, of course the dysuria will be greatly increased and may even result in retention of urine. Walking will be given up on account of the pain produced by friction of the parts.

The growth will also be an obstacle to the act of coitus, which will become painful or even impossible on account of spasmodic contractions of the vaginal sphincter.

The lymphatics are usually long in being invaded in epithelioma of the clitoris. Generally several months elapse before they are attacked, and this fact is of course a most favorable point for the treatment and ultimate result.

The progress of epithelioma of the clitoris is, generally speaking, slow, and it is safe to say that its duration may be considerable.

As I have pointed out to you, the beginning is slow and insidious; the growth may have been present for several months before the patient notices it.

It is after the latent stage of the malady that a series of functional disturbances, of great discomfort to the

patient, make their appearance, and I will not repeat them. Now, it is just at this time that the patient will consult you, and on examination you will find a condition of things that generally will not be difficult to recognize.

If you remove the neoplasm, as you should if the disease be not too far advanced, a permanent cure may be obtained, but recurrence is frequent and takes place with most astonishing rapidity, especially in cases of melanotic sarcoma.

If an epithelioma is left to itself, spontaneous cure, although most exceptional, is not impossible. I would quote to you what so great an authority, Prof. Cornil, says on this question: "It is certain that the tubulated form of epithelioma may be so superficial that it may get well, leaving a complete cicatrization on a large portion of the skin. The ulcerated part itself gives proof of the possibility of cicatrization, for the centre of the ulceration does not differ from a healthy wound, and the inflammation, after destruction and elimination of the epithelial mass, extends no further than the dermis." But, I repeat, this ultimate result is very exceptional.

An epithelioma left to itself will progress in most instances, invading the neighboring tissues, and particularly the mucous membrane of the vagina. The meatus urinarius and the neck of the bladder can be successively invaded, resulting in perforations, which are followed by vesico- or urethro-vaginal fistula. In the first case, the urine will be constantly voided per vaginam, while in the second its appearance is intermittent and only is present during micturation.

These complications are infrequent, and fortunately so for the patient.

Epithelioma may attain the cervix and the body of the uterus as well, and at the same time the inguinal and lumbar glands undergo a secondary degeneration.

Among the very infrequent complications, I would mention the propagation of the affection to the rectum, which is indicated by a great activity of the intestinal secretions, a copious diarrhœa, and occasionally rectal tenesmus. In still more infrequent cases, the disease, instead of following the mucous membrane, extends over the skin of the pubis or perineum.

A case is recorded by McClintock, in which the neoplasm invaded the entire external genital region, the pubis, groin, perineum and around the anus.

Other cases are reported where an epithelioma invaded the labia majora, the skin of the pubis and groins.

If the neoplasm be a melanotic sarcoma, you are, gentlemen, in the face of the most terrible of all malignant growths. It extends with a most astonishing rapidity, invading the lymphatic system, the abdominal and thoracic viscera in a very short lapse of time. As an example of its ravages I would mention the case of a lady of about forty, from whose breast we removed a small melanotic sarcoma. At the time of the operation, some lymphatic glands in the

corresponding axilla were found enlarged and were removed. This operation was done, if I remember correctly, in June, 1890, and the patient died the following August. At the autopsy the liver, kidneys, spleen, lungs and brain, were filled with foci of metastasis.

In addition to the local functional disturbances attending the presence of a neoplasm of the clitoris and its extension, you will have before you, as the case advances, the usual picture of the cachectic condition, œdema, diarrhœa, and intense suffering close the unhappy scene.

As to the prognosis of malignant growths of the clitoris, it may be admitted that it in no way differs from that of the same tumors in other parts of the human economy. Recurrence is frequent after operation, and the patients end their existence by a general invasion of the affection.

As to the diagnosis, gentlemen, I have something to say, as it is most important. Now, if an aged person should consult you for a tumor of the clitoris, covered with vegetations which bleed when touched, and secreting a dirty liquid with a fœtid odor, the diagnosis of epithelioma is easy. But it is not always so, and in some cases the diagnosis may give rise to considerable difficulty and error.

In several cases the neoplasm was regarded as an indurated chancre, and the patients were put on an antisyphilitic treatment, thus losing much valuable time.

I will trace out the various means of distinguishing epithelioma of the clitoris from other affections which resemble it in appearance.

As I have already pointed out, the tumor in the beginning only produces a few slight functional disturbances which do not annoy the patient sufficiently for medical advice, consequently an early diagnosis is hardly ever made.

But if you have an aged patient who complains of itching and pruritus of the vulva, which is exasperated by walking, and if this patient has cancer in her family history, you should always have in mind the possibility of cancer of the clitoris in its early stages, and do not hesitate to ask for an examination, which should be carefully done. By this means you may be fortunate enough to find a tumor in its commencement, or discover the presence of patches of psoriasis of the vulva, which as I have shown you, is sometimes the prelude of epithelioma.

Later on, when an epithelioma has developed into a tumor, be it ulcerated or not, the diagnosis may be quite difficult.

I do not think that you would have any trouble in recognizing the various benign tumors which may develop in these parts, such as papilloma, erectile tumors, cysts of the urethral glands, vegetations, etc.; but hypertrophy of the clitoris, the soft or hard chancre, elephantiasis and esthiomene of the vulva might easily lead you into error, as they have other men, even of great experience.

Simple hypertrophy of the clitoris is distinguished by its more regular

shape and firmer consistency; also from the absence of bleeding granulations and fœtid secretions. The lymphatic glands are normal.

The differential diagnosis of hard chancre and epithelioma is more difficult. Both affections may appear as a small circular ulceration, with a slightly elevated base, hard and painless.

But an epithelioma makes slower progress, and usually has been preceded by a more or less severe pruritus, which attracts the notice of the patient. A cancerous ulceration is ragged and irregular, and usually covered with a dirty liquid, and the inguinal glands are becoming enlarged.

The surface of a indurated chancre is more regular, shiny and dry, and is accompanied by enlarged inguinal glands, and what is the most important of all, are the secondary symptoms, which remove all doubt as to the real nature of the affection.

Tertiary lesions may also be mistaken for malignant disease. In both, the lesions may have that withered and dirty appearance in an old cachectic patient. Now, if the lesion be one of syphilis, you will have the history of the secondary manifestations of the affection; there will be no bleeding from the parts and only a slight induration of the bottom and borders of the ulcer; and still more there will probably be other manifestations of the diathesis at some other part of the body, if you take the necessary care in looking for them.

If, after all, you should still be in doubt, put your patient on specific treatment, which will in all probability produce a rapid amelioration in the case of syphilis.

There are some patients of lymphatic constitutions, in whom the ulcus molle may take on a phagedemic form, and their lesion mistaken for cancer. But the indurated base of malignant disease is absent in soft chancre, and remember that the progress of the latter affection is much more rapid than in the former; and furthermore, the inguinal adenitis is very much quicker in appearing, or a bubo may form, a complication which will never arise in the case of malignant neoplasms. And still more, the soft chancre is highly auto-inoculable, and this inoculation is favored in the female on account of the friction of the external genitals which are so closely opposed.

From the above mentioned characterics, I do not believe that you will be long in coming to a correct conclusion, if you carefully consider the question; but if there still remains a doubt in your mind, why then I should advise you to inoculate your patient with the discharge from the surface of the ulceration, which in the case of ulcus molle, will be followed in a few days by a positive result.

Epithelioma or sarcoma may be confounded with an affection of the vulva, first described by Huguier under the name of esthiomene, and which in reality is only lupus of the vulva. Now, contrary to lupus, whose progress is slow, and in which disease

the ulcers have a strong inclination to repair, malignant growths advance with greater rapidity, invade the tissues, at the same time destroying them, without ever showing any signs of cicatrisation.

You must also bear in mind that lupus is a frequent manifestation of the scrofula diathesis, so that you must go over the patients antecedents carefully, and make an examination in order to ascertain if there are any signs of old symptoms, or if the lesions so characteristic of the affection are present, such as enlarged glands, and chronic disease of the eye, nose or ear, troubles which are so common in strumous subjects.

Guérin and Bernutz laid great stress on the co-existence of lupus of the face with that of the vulva. Do not forget the aid that bacteriology may be to you, and in doubtful cases make careful examinations for Koch's bacillus, which although difficult to obtain, will be of utmost importance in the point of diagnosis, if its presence be detected.

The age of the patient must also be considered, as epithelioma is more often met with in the aged, while lupus and sarcoma are diseases of adult life.

The diagnosis between a tubercular and carcinomatous ulceration may be difficult; however, you will remember that in the former the ulcer has a granular bottom of a rosy-gray color, secreting a yellowish pus. The much regretted Prof. Trélat pointed out that a number of yellowish points were scattered around the limits of tubercular ulcerations, and this sign should be looked for. At the same time the lungs should be examined for signs of tuberculosis, and the spleen should be percussed in order to ascertain if it be enlarged.

Carcinoma is to be distinguished from epithelioma by its more rapid progress and its more destructive action on the surrounding tissues, as well as more severe hæmorrhages.

As to the treatment of malignant neoplasms, I would advise you to only use the knife. Formerly surgeons employed the ecraseur or the thermo-cautery in order to avoid hæmorrhage. But since the clamps devised by Péan are now currently employed, bleeding is not to be feared. You will consequently dissect out the *entire* growth, removing with it part of the surrounding healthy tissue, not forgetting to extirpate all the enlarged inguinal glands, if any are to be found. The corpus cavenosus should be removed with the clitoris, and you will take great care not to injure the meatus urinarius if this canal is not invaded by the neoplasm. In a case where the urethra is invaded by the growth, you must introduce a sound into the bladder and dissect the parts away, using the sound as a guide.

After thorough hæmostosis, the surfaces are united by silver wire, or, as I prefer, with sublimated silk. If you employ proper asepsis you will probably obtain reunion by first intention.

The dressings should be composed of iodoform gauze covered with sub-

limated gauze, the whole being held in place by a T bandage or a spica.

Inoperable cases will call for medical treatment. You must keep the parts as clean as possible with a one per cent. solution of creolin, eucorline, or lysol, and dust the surface with iodoform, or what is better, I think, with europhene.

To relieve the pain, morphine must be used freely.

Chéron recommends the following as a vaginal injection when the disease has invaded the vagina:

℞ Kalii carbonat, 18.0
Tinct. opii, 5.0
Aquæ, 200.0
m. f. solut.

Of this solution two or three spoonfuls are added to a litre of water, which is used as a vaginal irrigation, night and morning.

As it is my duty to instruct you in the latest ideas, I must before closing this lecture say a few words regarding a new treatment for inoperable carcinoma, which has lately been described and practised by my former and esteemed teacher, Prof. Vulliet, of Geneva. This treatment consists of intra-perenchymatous injections of alcohol.

After rendering the parts as aseptic as possible, three or four hyperdermic syringes are taken from the sterilizer and filled with *absolute alcohol.* The patient being placed in the genupectoral position, the first injections are made in the centre of the neoplasm. When the needle has penetrated sufficiently, so that a normal resistance is felt, three or four drops of alcohol are injected.

If bleeding occurs from the penetration of the needle, you should wait until this has stopped, otherwise the alcohol would run out with the blood.

Seven or eight drops of alcohol are injected, and the stop-cock of the needle is closed, the syringe withdrawn. Another needle is then inserted and the same technique followed. Four or five injections are thus practised at one séance, always proceeding from the centre of the neoplasm towards the periphery of the neoplasm, the last one penetrating the apparently healthy tissue.

In closing, let me mention the interstitial injections of an alcoholic solution of salicylic acid, and last of all the toxins of erysipelas, as practiced by Dr. W. B. Coley of New York. These various injections should be tried in all cases of inoperable malignant neoplasms.